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To Study Hematological Indices and Peripheral Smear Examination In Microcytic Hypochromic Anemia

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Objectives: To study hematological indices and peripheral smear examination in microcytic hypochromic anemia and to detect hemoglobinopathies by doing hemoglobin electrophoresis in microcytic hypochromic anemia.

Background data: Microcytic hypochromic anemia is common problem in central India. These are single gene, autosomal, recessive monogenic disorders that include thalassaemia and sickle cell anemia. Hemoglobinopathies presents as microcytic hypochromic anaemia, they are misdiagnosed and treated as iron deficiency anaemia. In hemoglobinopathies iron is not required by the body. This causes burden to the patient economically as well as on health. The excess iron which is not required by body has a toxic effect on the body. By doing electrophoresis in microcytic hypochromic anemia, we can categorize anaemia into different groups. Electrophoresis helps in giving correct diagnosis.

Methods:- Subjects for study obtained from the clinical cases suspected of anemia were 100 in total. All patients who presented with pallor and were detected to have microcytic hypochromic anemia on peripheral examination were included in the study. Anemic patients having cause other than microcytic hypochromic anemia and confirmed cases of Iron deficiency anemia were excluded. Investigations were done to confirm that Anemia is microcytic hypochromic anemia and to find out hemoglobinopathies as a cause MHA. Complete hemogram was performed and Hb electrophoresis was done after studying the iron profile and ruling out iron deficiency anemia by performing serum Iron level.

Results: use of electrophoresis showed out of 100 microcytic hypochromic anemia.

Conclusion:- Most common cause of MHA was iron deficiency anemia and 2nd being thalassemia. Differential diagnosis based on complete hemogram and peripheral smear is possible but special tests like serum iron profile and hemoglobin electrophoresis are a must for confirmation of diagnosis

Keywords: Microcytic Hypochromic Anemia,, Hb, RDW, MCV, TIBC, peripheral smear, hematological indices, Haemoglobin electrophoresis,